

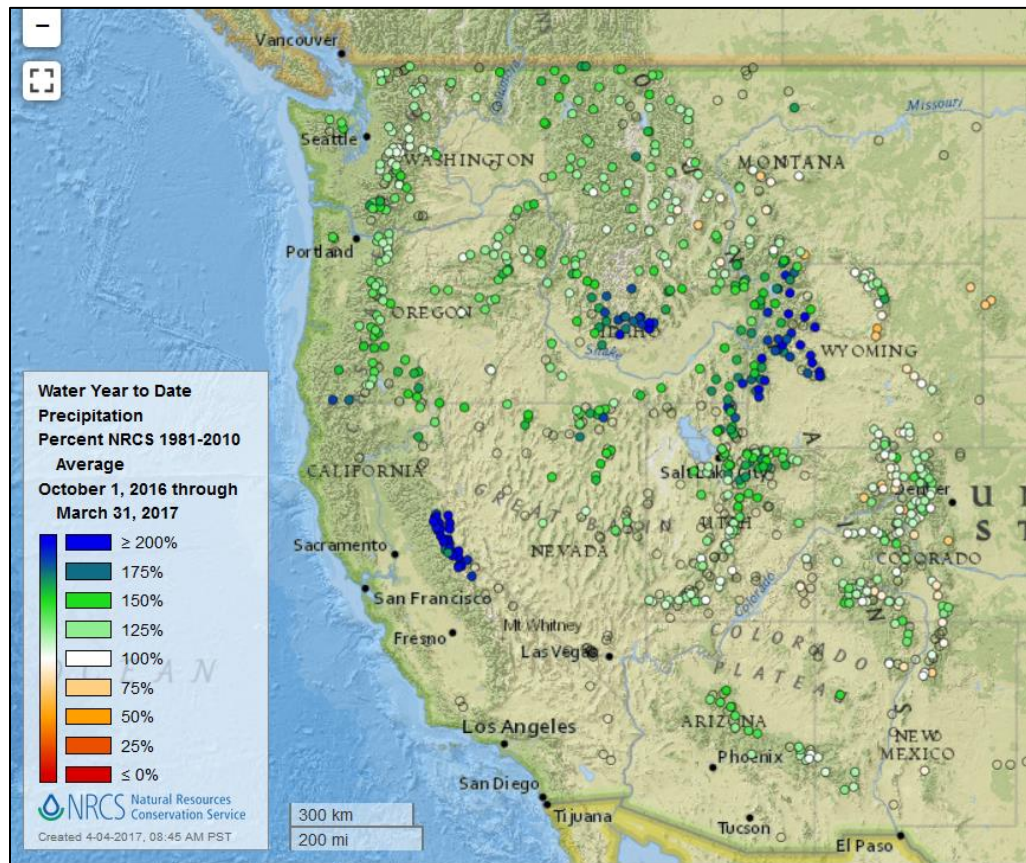
Western Snowpack and Water Supply Conditions April 2017

Overview

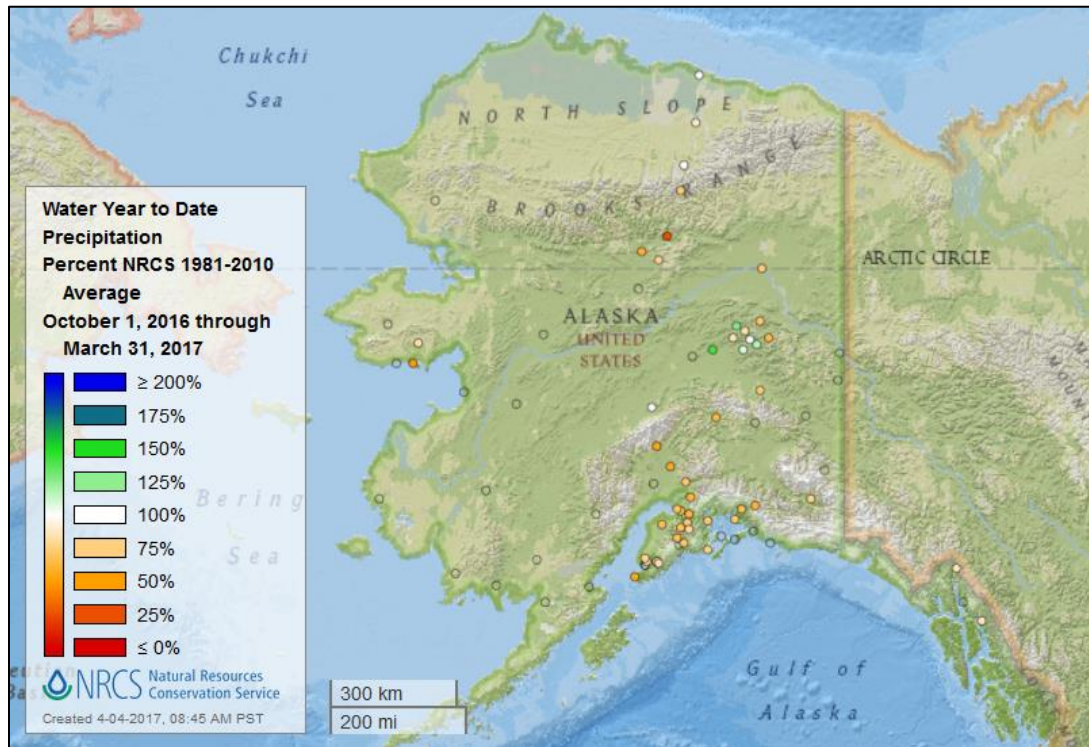
This report summarizes Snow Telemetry (SNOTEL) and snow course network data, streamflow forecasts, and reservoir storage data collected and analyzed by the [National Water and Climate Center](#).

Precipitation for the water year-to-date (beginning October 1, 2016) has been predominantly near to well above average throughout the West except in Alaska, where much of the state has been below average. **Snowpack** remains near to well above median over most of the West, although several areas have lost snowpack due to significant melt in March. Most of Alaska except the Interior has below median snowpack. **Streamflow forecasts** reflect the snowpack pattern, with most of the West expecting near to well above average streamflow. Southcentral Alaska and scattered areas in Montana, Colorado, and the Southwest are expecting below average streamflow. **Reservoir storage** has improved since last month and is near or above average everywhere except New Mexico and Washington.

Water Year-To-Date Precipitation



[Precipitation for the 2017 water year-to-date](#) has been near to well above average over the entire West. Particularly wet areas include the Sierra in California, central Idaho, and western Wyoming. This pattern has maintained itself over the past month. The only exceptions are a few scattered sites from New Mexico northward to Montana, which are somewhat below average.



[Precipitation in Alaska for the 2017 water year-to-date](#) remains near to well below average at most sites throughout the state except at a group of sites in the Interior near Fairbanks, which are near or somewhat above average.

Basin-filled maps containing monthly and daily updates of SNOTEL precipitation are available at: <https://www.wcc.nrcs.usda.gov/gis/precip.html>

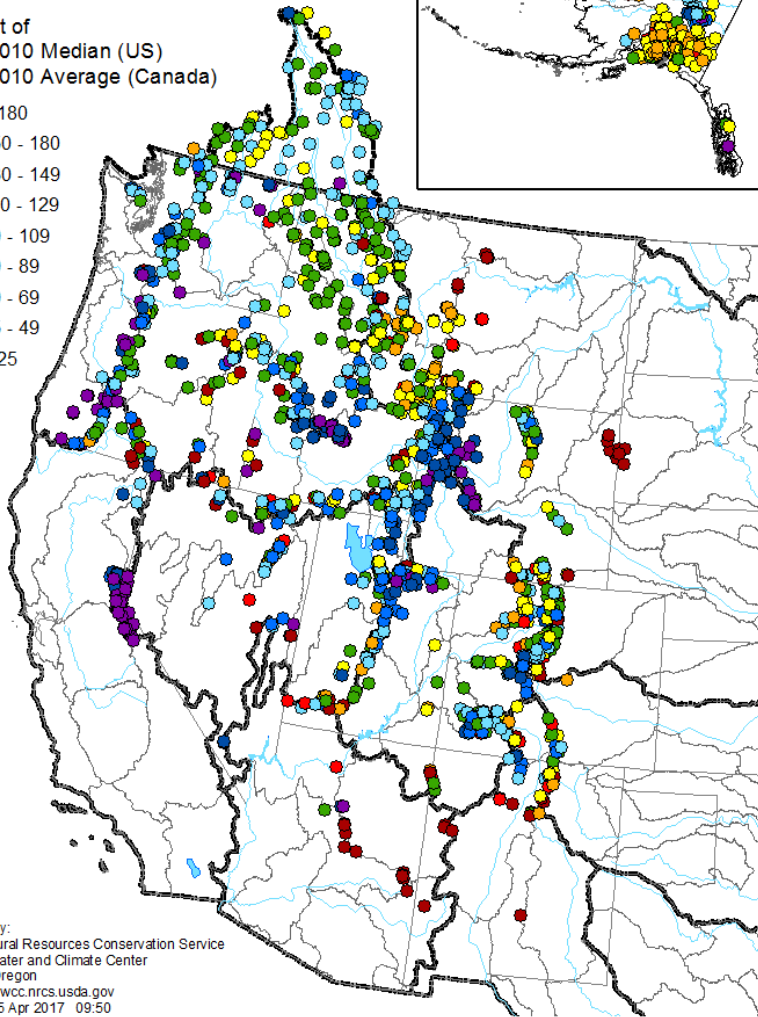
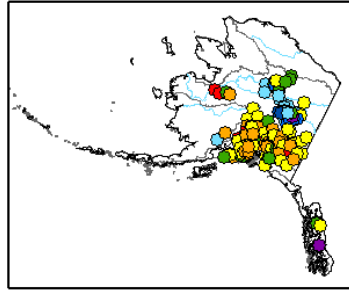
Snowpack

Mountain Snowpack as of April 1, 2017

Percent of
1981-2010 Median (US)
1981-2010 Average (Canada)

- > 180
- 150 - 180
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- 25 - 49
- < 25

Prepared by:
USDA Natural Resources Conservation Service
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Portland, Oregon
<http://www.wcc.nrcs.usda.gov>
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Snowpack at SNOTEL sites and snow courses

as of April 1 in the western U.S. and the Columbia Basin in Canada continued to show the contrast between the northern portion versus the rest of the region. However, also evident are the effects of an early snowmelt underway in several areas.

Snowpack remains generally near median at most sites in Washington, northern Idaho, Montana, and British Columbia. It continues to be well above median in the Sierra of California, central Idaho, western Wyoming, and northern Utah. In contrast, several areas, including Oregon, eastern Montana, southern Utah, and the Southwest, experienced significant snowmelt during March, reflected in declining snowpack percentages.

In Alaska, snowpack remains near or below median at most sites except in the Interior, which is predominantly above median.

Maps with daily updates of the snowpack (SNOTEL data only) for the entire West, as well as for individual states, are available at: <https://www.wcc.nrcs.usda.gov/gis/snow.html>

Streamflow Forecasts

[Streamflow forecasts](#) remain near to well above average in most of the West, reflecting the snowpack patterns. There are, however, some reductions in forecasts in areas that have experienced significant snowmelt already in March. This is most evident in Montana, Colorado, and the Southwest. In Alaska, the Southcentral area is expecting below average streamflow, whereas the Interior and Panhandle areas are near average.

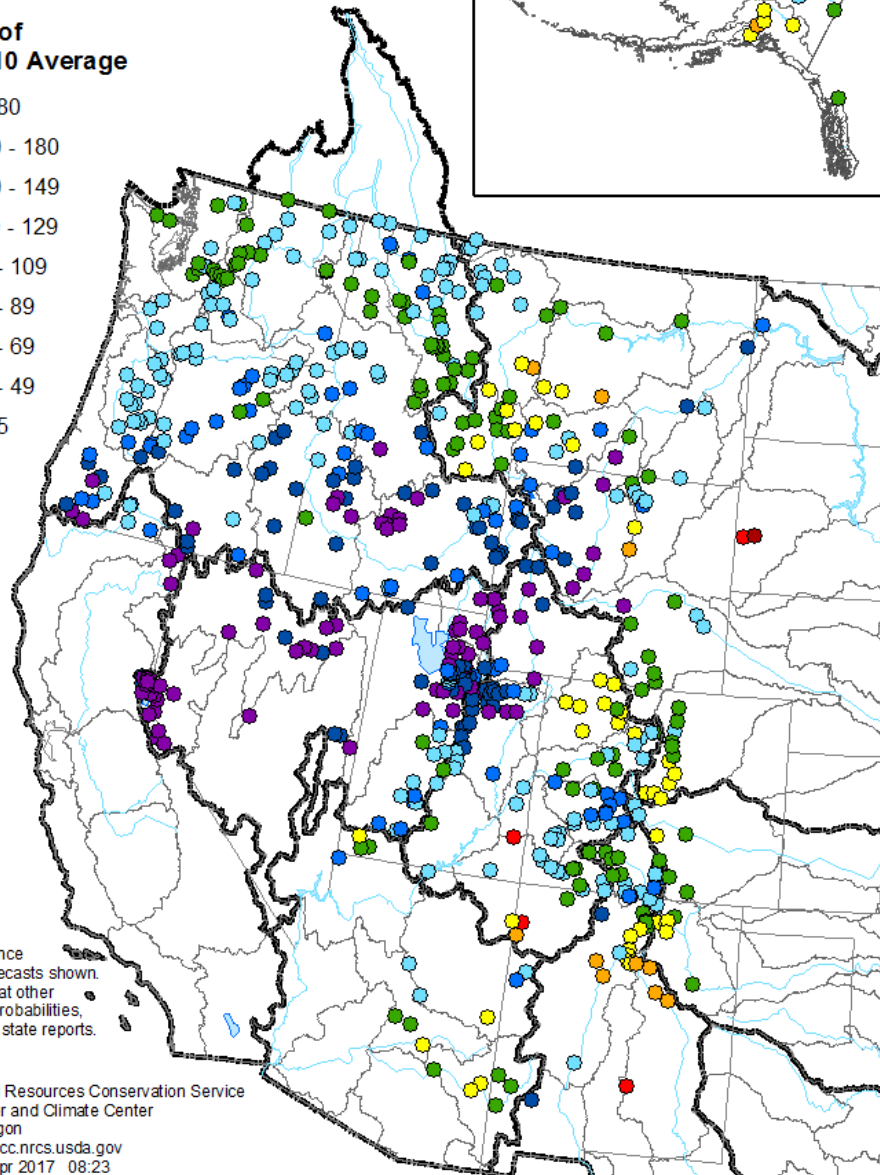
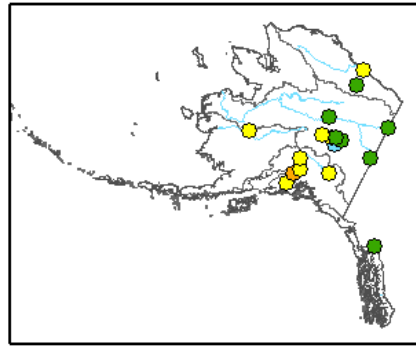
Spring and Summer Streamflow Forecasts as of April 1, 2017

Percent of
1981-2010 Average

- > 180
- 150 - 180
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- 25 - 49
- < 25

50% exceedance
probability forecasts shown.
For forecasts at other
exceedance probabilities,
see individual state reports.

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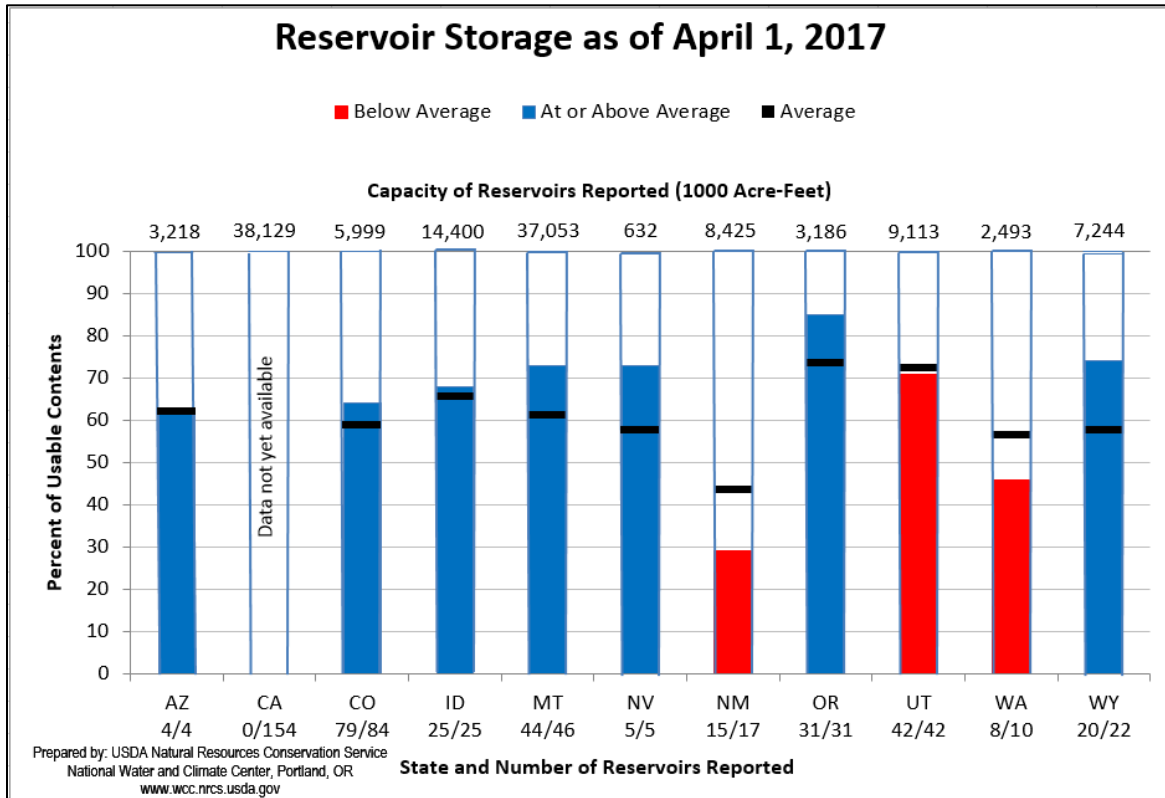
Trends in streamflow forecasts in basins for which daily water supply forecast models are available can be followed at: https://www.wcc.nrcs.usda.gov/wsf/daily_forecasts.html

Reservoir Storage

[Reservoir levels](#) have generally increased since last month. They are near or above average everywhere except New Mexico and Washington, where they remain below average.

Further data and charts are available at: <https://www.wcc.nrcs.usda.gov/wsf/wsf-reservoir.html>

Data for California are summarized at: <http://cdec.water.ca.gov/cgi-progs/reservoirs/STORSUM>



State Reports

Click a state name to view the full report

Alaska: March was a cold and dry month across most of Alaska. Much of the state received minimal or no precipitation during the month with the exception of southeast Alaska and the Arctic Plain. Snowpacks across the state are mixed. The central Tanana Valley is the only portion of the state with much above normal snowpack. There are near normal snowpacks in portions of southeast Alaska, the Arctic Plain, northwest Alaska, and the central Yukon basin. Southcentral and southwest Alaska along with portions of the Southeast and the Interior have below normal snowpacks.

Arizona: The snowpack is mostly melted out. However, the soils remain saturated, and the final forecast of the season calls for close to normal runoff through the end of May.

California:

Colorado: Unseasonably warm and dry weather dominated the first two-thirds of March in Colorado and much of the inter-mountain western United States. Many automated SNOTEL measurement stations in Colorado were unable to escape the heat, including a significant portion of the higher elevation locations, which lead to early season snowmelt. On April 1, statewide snowpack was at 108% of normal, down from 139% of normal last month and 156% on February 1. It has been a bit of a rollercoaster snowpack

season, with record low snowpack accumulation in October and November, followed by record high snowpack accumulation in December and January, and a return to near record low snowpack accumulation again in March. Relatively good snowpack remains in the Gunnison, Arkansas, and combined San Miguel, Dolores, Animas and San Juan Basins, all above 118% of normal. Only the combined Yampa and White Basins are now below normal.

Idaho: For 99% of Idaho, there will be no surface water shortages this year. The concerns across most of the state, especially in southern Idaho, are of too much snow and how to safely release the excess water.

Montana: Wet weather increased snowpack percentages west of the Continental Divide since March 1. Lack of snowfall and low-elevation melt dropped percentages east of the Divide. Many areas are near to above normal for April 1, but some central and southwest areas are below normal for this date.

Nevada: April 1 snowpacks are 192-217% of median in the eastern Sierra and 103-131% across the rest of northern Nevada. Water managers are proactively drawing down reservoirs to create space for snowmelt. Unlike the recent past, no one is worried about drought – instead, snowmelt flooding is a concern this spring.

New Mexico: Warmer than normal temperatures and below average monthly precipitation dominated New Mexico for most of March. Over the past month New Mexico experienced significant decreases in snow pack for most basins in the state.

Oregon: March brought a significant round of snowmelt to Oregon's mountains with warm temperatures and heavy rainfall. However, the abundant snowpack provided by previous winter storms proved its resilience and as of April 1, snowpack conditions remain near normal in southeastern Oregon and well above normal throughout the rest of the state. With abundant snowpack and above normal March precipitation, streamflow forecasts across the state are calling for above average to well above average flows for the summer water supply season. Most of Oregon's major irrigation reservoirs are storing average to above average amounts of water as of the end of March. Additionally, the drought monitor is showing Oregon in a drought-free status for the first time since 2011.

Utah: Southern Utah experienced substantial snowmelt and streamflow during March, and this runoff season should have average to above average streamflow. In northern Utah, lower elevation snowpacks have melted, but higher elevations continue to gain, adding to the currently high values. Flows in the north are anticipated to be exceptionally high and pose a significant risk of flooding.

Washington: March was another very wet month. Cool temperatures brought abundant mountain snow but also much localized flooding, mostly in eastern Washington, where rain helped bring off the remaining low-elevation snow.

Wyoming: On April 1, the Wind River Basin snowpack was nearly 200% of median.

For More Information

The USDA-NRCS National Water and Climate Center website provides the latest available snowpack and water supply information. Please visit us at: <https://www.wcc.nrcs.usda.gov>